thereupon lowering the depression by etching in order to produce the contact hole as far as an interface with the silicon substrate, the silicon substrate being uncovered, the layer including O_3/TEOS-SiO_2 serving as a lateral seal of the upper layer during the lowering of the depression.

2. (Once amended) The method as claimed in claim 1, wherein forming the perforated mask comprises forming a perforated mask including polyimide.

3. (Once amended) The method as claimed in claim 1, wherein forming the perforated mask comprises forming a perforated mask including photoimide.

4. (Once amended) The method as claimed in claim 1, wherein, after the uncovering of the silicon substrate at the bottom of the contact hole, the silicon substrate being spared, a second layer including O_3/TEOS-SiO_2 is deposited into the contact hole and onto a top surface proximate the contact hole.

5. (Once amended) The method as claimed in claim 4, wherein the perforated mask material is stripped prior to deposition of the second layer including O_3/TEOS-SiO_2.

6. (Once amended) The method as claimed in claim 1, further comprising:

selecting a material for the upper layer from the group consisting of a ferroelectric material and a material having a high dielectric constant.

Please add new claims 7 – 20.

--7. (New) The method of claim 6, wherein selecting the material includes selecting a material from the group consisting of strontium bismuth tantalate, PZT, and barium strontium titanate.

8. (New) A method for fabricating a contact hole for a semiconductor component, the method comprising:

providing a silicon substrate including an intermediate dielectric layer formed thereon;

forming a resist mask over the intermediate dielectric layer, the resist mask defining an opening;

etching the intermediate dielectric layer through the resist mask opening to form a depression having sidewalls, leaving a residual thickness of the intermediate dielectric layer at a bottom portion of the depression;

depositing a layer including O_3/TEOS-SiO_2 over the intermediate dielectric layer and along the sidewalls of the depression;

etching the layer including O_3/TEOS-SiO_2 from the bottom of the depression; and

further etching the intermediate dielectric layer to extend the depression further down to an interface between the intermediate dielectric layer and the silicon substrate until a top surface of the silicon substrate is uncovered.

9. (New) The method of claim 8, wherein providing a silicon substrate includes providing a silicon substrate having an upper layer disposed over the intermediate dielectric layer, the method further comprising:

prior to etching the intermediate dielectric layer, forming the resist mask on the upper layer; and

etching a portion of the upper layer through the resist mask opening.

10. (New) The method of claim 9, wherein providing a silicon substrate comprises providing a silicon substrate having an upper layer including a ferroelectric material.

11. (New) The method of claim 10, wherein providing a silicon substrate comprises providing a silicon substrate having an upper layer including strontium bismuth tantalate.

12. (New) The method of claim 9, wherein providing a silicon substrate comprises providing a silicon substrate having an upper layer including a material with a high dielectric constant.

13. (New) The method of claim 12, wherein providing a silicon substrate comprises providing a silicon substrate having an upper layer including barium strontium titanate.

14. (New) The method of claim 13, further comprising:

after etching the intermediate dielectric to extend the depression until the top surface of silicon is uncovered, depositing a second layer having O_3/TEOS-SiO_2 into the depression and onto a top surface proximate to the depression.

15. (New) The method of claim 14, further comprising:

stripping the resist mask before depositing the second layer.

16. (New) A method for forming a contact hole, the method comprising:

applying a mask over an intermediate layer formed over a substrate, the mask defining an opening;

forming a depression in the intermediate layer through the opening, the depression having sidewalls and a bottom portion;

forming a protective layer on the sidewalls of the depression; and

further deepening the depression.

17. (New) The method of claim 16, further comprising selecting the protective layer to include an oxide.

18. (New) The method of claim 17, further comprising selecting the protective layer to include silicon dioxide.

19. (New) The method of claim 16, wherein forming a depression comprises etching the intermediate layer.

20. (New) The method of claim 16, further comprising selecting the intermediate layer to include a dielectric material.--